

**I CLAIM:**

1       1. A method of forming controlled cracks in predetermined  
2       areas of a brittle plating of a test plate, said test plate  
3       having a substrate which has a plated area on a plated side and  
4       a back side, said method comprising:

5             drilling a hole partway through said substrate from the  
6       back side of said test plate opposite an area which is plated on  
7       the plated side thereby creating a cavity having a cavity  
8       diameter and a cavity bottom;

9             inserting a point of a hardened tip into said cavity;  
10          forcing said point against said cavity bottom with  
11       sufficient force to create a deformation of a portion of said  
12       plated area beneath said cavity bottom thereby forming a  
13       plurality of cracks in said plated area limited to an area no  
14       larger than and controlled by the cavity diameter.

1       2. The method of forming controlled cracks of Claim 1  
2       wherein a plurality of holes of differing diameters are drilled  
3       partway through said substrate and a point of a hardened tip is  
4       inserted into and forced against the resulting cavity bottoms to  
5       form a plurality of cracks at locations opposite each of said  
6       plurality of holes.

3. The method of forming controlled cracks of Claim 1 wherein said point of said hardened tip is forced a predetermined distance against said cavity bottom.

4. The method of forming controlled cracks of Claim 1 wherein said substrate has a thickness of about three thirty seconds of an inch thick and said hole is drilled more than half way through said substrate.

5. The method of forming controlled cracks of Claim 4 wherein holes of at least three different diameters are drilled partway through said substrate comprising a hole of the smallest diameter, an intermediate diameter and the largest diameter.

1           6. The method of forming controlled cracks of Claim 5  
2         wherein the hole of the smallest diameter is drilled furthest  
3         into said substrate, the hole of intermediate diameter is drilled  
4         an intermediate distance into said substrate and the hole of  
5         largest diameter is drilled the least distance into said  
6         substrate.

7. The method of forming controlled cracks of Claim 6 wherein the hole of the largest diameter is drilled about half way through said substrate.